AMENDMENTS TO THE SPECIFICATION

The Examiner objected to the disclosure because it lacked a brief description of the drawings. In response, please amend the disclosure to add the following paragraphs.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1A: Shows an aperture functionalized with a DNA probe where there is no target present.

Figure 1B: Shows an aperture functionalized with a DNA probe where the target is present and bound to the DNA probe

Figure 2: Shows the prolonged decrease in ionic current as measured over time across the surfaces of the aperture when a target binds to the probe.

Figure 3: Shows an aperture tapered at one end that has been functionalized with a DNA probe that is held in place at one end of the aperture by means of a macro-cyclic ring.

Figure 4: Shows the design of the FIB processing. Chrome locator lines deposited on top of a silicon nitride layer point to a single pit on a thinned Silicon On Insulator (SOI) wafer.

Figure 5: Shows the design for electrochemical processing. Etched locator lines buried under a silicon nitride layer point to a single pit on a thinned silicon wafer.

Figure 6: Shows apertures that were prepared using the electrochemical etching technique with a top diameter of 10 nm and a length of 8 μm.

Figures 7a and 7b: Shows top views of apertures of various sizes prepared by FIB drilling.

Figure 8: Shows the means of functionalizing an aperture by creating a macro-cyclic ring using a rigid phenyl-ethylene backbone that is placed over the circumference of the aperture.

Figures 9a-c: Shows an example of the synthesis of a macro-cyclic ring.